

Opening Remarks
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Chairman, Science Subcommittee on Energy

***Assessing the Goals, Schedule and Costs of the
Global Nuclear Energy Partnership***

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I want to welcome everyone to this hearing on the President's Global Nuclear Energy Partnership, commonly referred to as G-NEP. The purpose of this partnership is to clear the way for the safe expansion of nuclear energy worldwide. How do we do this? By using technology to address growing inventories of spent nuclear fuel so that we won't need another Yucca Mountain. Today we intend to take a look at the goals, schedules and costs associated with this innovative research and development (R&D) program.

In twenty years, electricity demand in the United States is expected to increase by 50 percent. We must meet that demand and do so in an environmentally responsible way. Carefree increases in greenhouse gas emissions are not an option. We need a diverse supply of clean electricity, and nuclear power *must* be part of that mix. It is the only reliable, carbon-free emissions-free source of electricity currently available that could provide the baseload capacity to meet this demand. If we cannot supply our nation's need for clean energy, we run the risk of unacceptable environmental and economic consequences.

However, for the United States and the world to benefit from the expanded use of nuclear energy, there is one vitally important issue that must be resolved – what we do with growing inventories of spent nuclear fuel. Yucca Mountain was to be *the* solution. Unfortunately, its intended opening slipped from 1998 to 2010. Then it slipped again to 2012 or 2014, or possibly even later. And we all know by now that the statutory limit of Yucca Mountain is such that the repository effectively will be full from the waste generated by 2010.

Yesterday, President Bush sent to Capitol Hill draft legislation intended to speed construction of the nuclear waste repository at Yucca Mountain. As part of his proposal, President Bush would lift the *statutory* limit on the capacity of Yucca Mountain, which is set at 70,000 metric tons under current law. Lifting this limit would allow for the storage of up to 120,000 metric tons of spent fuel, which is still less than the repository's *technical* capacity.

This proposal certainly buys us some time, but it would not obviate the need for additional repositories this century. At one of this subcommittee's previous hearings on the future of nuclear energy, a witness testified that the U.S. would need up to nine additional repositories – nine additional Yucca Mountains – to accommodate the waste generated in the 21st Century alone.

The good news is that we can achieve the vision of a *single* repository for the next century. How do we do this? By transitioning to a closed – or some prefer the term advanced – fuel cycle now.

The advanced fuel cycle that I envision involves a lot more than just the reprocessing of spent nuclear fuel. Reprocessing alone won't really help. It would only reduce the heat load of waste destined for Yucca Mountain by 10 percent. We also need to recycle and reduce spent fuel using fast reactors for transmutation, which could reduce the heat load by a factor of 10 or more.

To ensure a sustainable future for nuclear power in the United States, we must develop an advanced fuel cycle with all three components. We must take bold action now to realize the benefits of the advanced fuel cycle to our energy security, our economic security, and our national security. And I believe that the Administration has stepped up to the challenge with the announcement of the Global Nuclear Energy Partnership.

GNEP supports the comprehensive development of an advanced fuel cycle, including all three of the important elements I just mentioned – reprocessing, recycling, and the use of advanced burner reactors to reduce the waste. And it puts their development on a very aggressive timetable. We need to start now because these technologies won't be developed overnight.

We are eager to learn more about the details of this important initiative, especially details about the comprehensive systems analysis. It is essential that DOE understands how every component of the advanced fuel cycle interacts as the fuel moves through the system from cradle to grave. This will ensure the success of the program and raise the confidence of Congress and the public that we are making smart choices. Through modeling that incorporates the relevant technical, economic, and policy considerations, this "systems approach" will allow us to optimize the fuel cycle and make informed decisions about how to proceed.

I understand that this effort already is underway, and I applaud DOE for requesting a separate funding line in the FY07 budget request to support this systems analysis. I believe such an analysis is the lynchpin of GNEP.

Whether we are motivated by climate change, our addiction to foreign sources of energy, or skyrocketing energy costs – all of which have national security implications – nuclear power is a necessary and significant part of the solution. However, nuclear energy as we know it today won't be sustainable without an advanced fuel cycle.

I realize that some of the witnesses on the panel today are concerned about the timelines and R&D priorities proposed by the DOE. I think it's important that we allow smart, informed nuclear scientists and engineers from outside the Administration to weigh in. It's also important that we hear from members of the energy industry, who, in the long term, will be an important player in the deployment of an advanced fuel cycle.

Without hesitation, I support the vision of GNEP. We owe our children and grandchildren our best effort to secure a clean, safe, reliable fuel for the future.

With that, I want to thank our witnesses for agreeing to share their knowledge and insight with us today. I look forward to an open and spirited discussion on this very important subject.